Chapter II. Production.

Wild Animals.

Indian Antelope.

twenty-seven inches long, and diverge at the tip from nine to eighteen inches. The female is somewhat smaller, and is a pale yellowish fawn colour above, white beneath and inside the limbs, and with a pale streak from the shoulder to the haunch. Between Pánchgaon and Kaládgi, on the road from Belgaum, a white doe was reported some eight or ten years ago, but not seen, and a couple of years ago in Kod in Dhárwár an officer of the Southern Marátha Survey shot a doe antelope with horns of an irregular shape.

Bees.

Kánara Bees[1] are of four kinds, *togar-jeinu* or *totte-jeinu, tudabi-jeinu, kol-jeinu* or *katti-hulla,* and *nusarri-jeinu* or *misri.* Of these four kinds of bees the *togar-jeinu* is the largest, being three-fourths of an inch in length. It has a black fore and hind part, and is of a dull red about the centre. It is particularly fierce and will often attack people even when not molested, and once fairly roused a swarm becomes dangerous and difficult to shake off. The *togar-jeinu* fastens its combs to the upper limbs of the loftiest trees, often 150 feet high, and as many as from twenty to thirty combs may sometimes be seen on a single tree. The combs are also found attached to steep and difficult cliffs and to the sides of high bridges and even to the walls of houses. The swarms generally leave their nests about July, and find their way to the parts of the country where grass and other favourite plants are found. They always return and rebuild in the same place year after year. The size of the comb varies with the size of the swarm, each comb being separate, from a foot and a half to three feet long and from eight inches to two feet deep. The bees gather honey from the blossoms of many timber trees. But their favourite plant is the *kárvi* or Strobilanthus, of which there are seven or eight kinds in Kánara. They abound along the Sahyádris and blossom at periods varying from three to nine years. When the Strobilanthus is in flower the whole air near the plants seems alive with bees. A full comb of the *togari-jeinu* bee contains from eight to fifteen beer bottles of reddish-brown honey and from one to two and a half pounds of wax. The honey and wax are harvested during dark nights, twice in the year, once just before or after the setting in of the rains in April-May, and again in October-November. The October-November honey is called the grass harvest, and the April-May honey when many trees and shrubs are in flower the main harvest. The combs are taken from the high trees with the help of long bamboos whose side branches are cut short to serve as steps. These bamboos are tied all the way up the trees and right on to the branches to which the combs are fastened. The tree is climbed in a dark night, the climber carrying a flaming torch which he passes across the swarms of bees to drive them off. The combs are taken and either lowered by a rope or put in a basket tied to the climber. The bees are not destroyed, only scared by the glare and smoke of the torch. The climber must show no fear or hesitation, though he seldom comes off scathless, and is often badly stung.

[1] Conservator of Forests S. D.'s 1862, 22nd June 1882.

Bees

From high cliffs honey is taken either from below by bamboo ladders, or from above, the honey-gatherer being seated in a basket or net let down over the top of the cliff by a rope.

The second or *tudabi* bee is about half an inch long with a black fore part and a striped black and dirty yellow hind part. It builds its combs in the hollows of trees and in old walls. It is not so fierce as the *togar* bee and its sting is less painful. Its honey also is more esteemed, but the combs are far smaller and do not hold more than from one to three beer bottles. The bees are generally smoked out but they are sometimes blown out by the breath of the honey-taker's mouth. The combs are removed in open day, the honey-taker's hands being often covered with bees.

The third or *kol* bee builds its combs on thorn bushes or small plants. It is smaller than the *tudabi* bee, and produces less honey and wax, though it is of a finer quality than the other two. The comb which holds at the most about a tea-cupful of honey is generally full before the beginning of the hot season, after which the young swarms come out and finish the honey, and the comb is deserted. Where the supply of flowers fails the bees mostly die, though some move to other places where the rains are lighter or flowers less scarce. The insect stings a little, but is easily driven off, and the branch on which the comb is found is cut away with a knife or other sharp instrument.

The fourth or *nusarri* or *misri* bee is not larger than an ordinary black ant. It is found in the hollows of trees and in walls. The honey, which is used as medicine, is whitish, and the wax black. This little insect, or so-called bee, does not sting, but at times is very troublesome in its endeavours to get into the ears, nose, and eyes.

Tame Bees.

Bees are never thoroughly domesticated. In some small hill villages in a white ant's nest or more rarely in a hole made for the purpose, an earthen pot is placed with its mouth down and a small opening made on one side. This completes the hive. It is left to chance whether bees take up their quarters in it or not. If they do, they are allowed to remain unmolested for some time and then the comb is extracted, care being taken not to disturb the part in which the young bees are lodged. In this way the bees do not get frightened and remain for a year or two. They seldom stay longer as either through carelessness or greed the young bees are disturbed and the old ones fly off. This honey is mostly used for home medicine.

The right to collect honey and wax is yearly farmed, and higher bids are made for the farms in years when the *kárvi* or Strobilanthus is in flower. The revenue derived from honey during the four years ending 1880-81 amounted to £1914 (Rs. 19,140) or an average yearly income of about £478 (Rs. 4780).[1]

[1] The details were: £380 12*s.* 9*d.* (Rs. 3806⅜) in 1877-78; £380 7*s.* (Rs. 3803½) in 1878-79; £657 2*s.* 9*d.* (Rs. 6571⅜) in 1879-80; and £495 18*s.* 6*d.* (Rs. 4959¼) in 1880-81.

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Bees.

The estimated yearly outturn is about 568 cwt. (113 *khandis* and 6 *mans*) of honey, and 290 cwt. (58 *khandis* and 1¼ *mans*) of wax. The honey sells at 1½*d.* to 6*d.* (1-4 *annas*) the ordinay quart bottle according to quality. There is little local demand for honey, most of it goes to Bombay. The wax is made by separating the honey from the wax by squeezing the comb. This is heated in an open pan over the fire, melted, and made into small black balls. These balls are again heated and strained, and the wax is put into square or round holes in the ground, where it forms hard yellowish cakes from a quarter of a *man* to a *man* in weight. A *man* of wax costs to make about 16*s.* (Rs. 8). Wax meets with a ready sale, most of it being sent to Goa and made into the candles which are burnt there on the altars of the Roman Catholic churches.

Snakes.

The district is everywhere infested with snakes both poisonous and harmless. The cobra, *nág* (M.), *nagada* or *nághavu* (K.), Naja tripudians, is found everywhere. The cobra is held sacred by all Hindus and is not killed except by Christians and Musalmáns. Other venomous snakes are killed by all classes especially in the hot season, when they come for air into the open and are easily seen. The number of persons returned as killed by snake bites was twenty-seven in 1871, nineteen in 1872, twenty-seven in 1873, seventeen in 1874, twenty-three in 1875, twenty-six in 1876, twenty-four in 1877, twenty-five in 1878, sixteen in 1879, and thirteen in 1880, thus giving the total of 217 persons killed in ten years or an average of about 21 persons killed in each year. The number of cattle killed by snake bites is returned at twenty-five in 1875, fifteen in 1876, sixteen in 1877, twenty in 1878, three in 1879, and three in 1880, a total of eighty-two deaths in six years, or a yearly average of about 14. In 1875 ninety snakes were killed at a cost of 15*s.* 11½*d.* (Rs. 7-15-6); in 1876, sixty-eight for 11*s.* 9*d.* (Rs. 5⅞); in 1877, thirty-five for 5*s.* 6¾*d.* (Rs. 2-12-6); in 1878, fifty for 8*s.* 10½*d.* (Rs. 4 7/16); in 1879 seventy-six for 13*s.* 9*d.* (Rs. 6⅞); and in 1880, 113 for £1 9*s.* 4½*d* (Rs. 14⅝) giving a total of 432 snakes killed in six years at a cost of £4 5*s.* 3*d.* (Rs. 42⅝). Government have lately (1879) discontinued the grant of rewards for the destruction of snakes, and municipalities are required to pay rewards for snakes killed within municipal limits. The following is a list of the chief venomous snakes found in the district.

The Cobra, *nág*, Naja tripudians, is of two kinds, the black or *kála* and the white or *pándhra*. Mr. E. Mackenzie, Assistant Surgeon, Kumta dispensary, in his report for 1873-74, gives the following details of a fatal case of cobra bite. The patient, a boy, was admitted at 11-40 and died at 2-30. Though more than an hour had passed since he was bitten, when he was brought to the hospital, the symptoms, though urgent, did not seem to point to a fatal issue. The most marked symptom was paroxysms of pain stretching up the limbs. The boy was lively and talkative, but there was an uncontrollable drooping of the upper eyelid. The breathing and circulation were unaffected. From his admission till his death the symptoms became slowly but steadily more serious. The

Snakes.

drooping of the eyelid became more marked, the boy dragging it up when he wanted to use his eye. In the paroxysms he shouted from pain. Next he mumbled in his speech. Then the tongue lost feeling and the speech grew dim till the tongue moved without sound. Breathing became heavy and spasmodic, the throat and tongue dried, he grew drowsy, fell in a swoon, and was dead.

Echis carinata, *fursa* or *dulbakra*, found mostly on the coast, is identical with the Ratnágiri *fursa*. *Fursa* bites are not always or even generally fatal. In severe cases the chief symptoms are a rapid swelling, discolouration, ecchymosis, and soddening of the bitten limb. Next comes a constant oozing of dark watery blood from the bitten part, gangrene spreads round the wound, blood comes from the gums, the skin, the bowels, and the stomach; the circulation is depressed, and cold clammy sweats and dizziness end in a swoon. Two species of Daboia elegans, *kudrál* or *kusáda mandol*, and *rakta mandol*, are identical with the Ratnágiri *ghonas*. The bite of the first causes a sloughing of the bitten part and that of the second blood vomiting and other symptoms like those of the *fursa* bite. *Náneta* or *Ajimanera*, Bungarus cœruleus, also called *pasko* in the Konkan, is identical with the Ratnágiri *manyár*. *Shenyasáp* a dark coloured venomous snake, *sunkpall*, *jogi*, *surgund*, and *ajgar* a species of boa, have not been identified.

Harmless Snakes.

Ár or *hebbáu*, the Indian python or boa-constrictor is found in the forests sometimes of a very great size. *Malund* or *imadi*, is the Ratnágiri *dutonda*. *Divad*, Ptyas mucosus, is harmless but is believed to have the power of killing some animals by blows of its tail. It is identical with the Ratnágiri *dháman*. *Hevalo* or *vale*, Ophiophagus elaps, is the Ratnágiri *ádhela*, and *hasrahau* or *sarpatolla*, Passerita mycterizans, is the green tree or whip snake. There are many snakes both venomous and harmless which have not been identified.

Fish.

Except in Supa and Mundgod, where the rivers are not well stocked with fish, both salt and fresh water fishing is extensively carried on throughout the district. In the Bhávangiri pond, six miles south-west of Siddápur, which is about one-fifth of a square mile in area and lined with stone masonry, the fish are held sacred and some of them have golden rings fastened to their fins.[1] No one ever catches them. Some are said to be of enormous size. In no other river, stream, or pond are the fish held sacred. The coast fishing is carried on with vigour from October to May; but in the four stormy months from June to September few boats go to sea. The chief salt water fish are the *surmai*, mullet, sardine, sole, and pomphlet. In Kárwár the *karcha* is held sacred and brought to stock new wells and ponds. It is never killed. During the stormy months when sea-fishing is stopped large numbers of people throng the rivers and brooks where fish are abundant.

Fresh water fisheries may be roughly divided into pond and stream fisheries. Pond fish are found in large numbers and of great

[1] The fish were probably caught young, and their fins pierced,

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size, especially above the Sahyádris. Fish are found in all streams, and in large numbers in the Kálinadi, Gangávali, Tadri, and Shirávati. The deep pools and large rocks of the Kálinadi and Shirávati are particularly suited for sheltering fish. Fish are caught by nets in February, March, April, and May. In the hot season when the ponds are low people catch fish by a net-work of slender sticks. From June to September, when the rivers and ponds are full or overflowing, fishers stand at night on the edge of ponds and on river banks with a light and a sickle in their hands and hack the fish with the sickle as they rise to the surface to gaze at the light. During the rains when fish pass through water channels from small to large ponds the fishers either spread nets or set up a net-work of slender sticks in the channel and catch the fish as they pass. In places where small streams join rivers, the people catch fish by narrowing the stream by sticks and matting, leaving small holes to let the flood water in.[1] Fish are rarely caught in nets during October, November, December, and January. In the fair season when the water is low, fish are caught in deep reaches, either by angling or by poisoning the water. Sometimes fish are poisoned by throwing into the pools the bark of the *chápal karu* or the *garuda kurada*. In July and August, when the rivers are swollen, the big fish, which have become impregnated in March and April, run against the flood to the higher parts of the river, where they spawn, and in October, when the waters begin to fall, they drop down to some deep pool or reach where they lie during the hot weather.

Fishermen.

Fresh water fishing is carried on by Musalmáns, Halepaiks, Byádars, Kabbers, Holers, and Chámbhárs. The regular salt water fishers are Bhois, Gábits, Darjis, Ámbers, Khárvis, Mogers, and Harikantars. Besides these local fishers, men of the Kulikat caste come from Dhárwár or Maisur in March and April and catch fish in the rivers of Varáda, Sáde, and Supa by diving, and by nets, hooks, and lighted torches.

Fish.

Fresh fish are generally sold for local use, either in markets or from door to door, and salt fish are sent to the districts above the Sahyádris. Most fish are paid for in cash and some in grain. The fishermen say that the supply of fish is smaller than it used to be.

The following is a list of the chief fishes[2] found along the Kánara coast. The first number after each name refers to the Plates in Dr. Day's Fishes of India and the second to the figure in the Plate: *Ghur machi*, Lates calcarifer, 1, 1, grows about six feet long and is found both in the sea and in rivers. It is considered a well tasted fish. The largest fetch up to 4*s*. (Rs. 2). *Gobra machi*, Cromileptes altivelis, 1, 2, grows about twelve feet long and four feet broad. *Thámbosa*, Serranus sonnerati, 7, 1, a salt-water fish grows about eighteen inches long. *Thávi*, Sennarus boelang, 7, 2 grows to one foot in length. *Raygond*, Variola

[1] Report on Fresh Water Fish and Fisheries, 8596 of 1873.
[2] Contributed by Mr. R. E. Candy, C.S., Acting Collector, Kánara.

louty, 7, 3; Ditto *Kárel*, Anthias multidens, 7, 4; Ditto *Kondva*, Grammistes orientalis, 9, 1, is less than a foot long. *Kumbar* (Hind.), *Ambye* (Kan.), Diploprion bifasciatum, 9, 2, less than eighteen inches long. *Kharpha* (Hind.), *Kárai* (Kan.), Lutianus sebæ, 9, 3, grows to two feet long. *Palu*, Lutianus erythropterus (young), 10, 1, grows to a foot long. *Ghurval*, Lutianus erythropterus (adult), does not grow more than two feet long. *Láthri* (Hind.), Lutianus lineolatus, 11, 1, does not grow more than three feet long. *Thumbrus* (Hind.), Lutianus rivulatus, 11, 4; Ditto *Lása*, Lutianus lioglossus, 12, 1; does not grow more than half a foot long. *Kánchuk* (Hind.), *Burata* (Kan.), Ambassis nama, 14, 5, never above four inches long, is found both in salt and fresh water. *Khámp* (Hind.), Ambassis ranga, 14, 6, about four inches long, is found only in salt water. *Shethuk*, Gerres setifer, 25, 1, never more than four inches long is found only in salt water. *Khárai*, Chætodon plebius, 26, 4; *Bhárkál*, Chætodon guttatissimus, 27, 4, never more than a foot long. *Kánchuk*, Pempheris mangula, 42, 3, never more than three inches long. *Daria Ravúns*, Polynemus paradiseus, 42, 4, grows six feet long. *Soundala*, Kurtus indicus (male), 42, about six inches long. *Jámp Ravuns*, Polynemus heptadactylus, 42, 5, grows six feet long. *Mazardore*, Umbrina sinuata, 46, seldom more than a foot long. *Thuperu*, Otolithus maculatus, 46, 4; within six inches long. *Tharousa*, Histiophorus brevirostris, 47, 3, a salt water fish said to grow to twenty feet long. *Balavasa*, Trichurus savala, 47, 4, never more than two feet long. *Konkare*, Caranx crumenophthalmus, 49, 1, about five feet long. *Vanvasa*, Caranx gallus, 51, 3, never more than eighteen inches long. *Sumbidagol*, Seriolichthys bipinnulatus, 51A, 1, found in salt water only, grows up to six feet long. *Jampdagol*, Naucrates ductor, 51A, 2; Ditto *Shirkal*, Trachynotus bailloni, 51A, 4, grows up to three feet long. *Fáni*, Platax vespertilio, 51A, 5. *Belda*, a species of Pomphlet, Psettus falciformis, 51A, 6. *Sunikap*, Platax teira, 51B, 4. *Phatharkáp*, Equula lineolata, 51C, 3. *Chandratya*, white Pomphlet, Stromateus cinereus (immature), 53, 3. *Halva*, or *Usarga*, black Pomphlet, Stromateus niger, 53, 4. *Putiakap*, Mene maculate, 53, 5. *Bibia Gedar*, Scomber microlepidotus (young), 54, 3. *Kovla Gedar*, Scomber microlepidotus (adult), 53, 5. *Surmai* or *Anjara*, Cybium guttatum (young), 55, 1. *Morvasa*, Elacate nigra, 55, 2. *Mekri*, Echaneis brachyptera, 55, 3. *Ghuma*, Ichthyscopus inerme, 55, 5. *Pip*, of the *Gedar* species, Pelamys chilensis, 56, 1. *Khulkula* of the *Surmai* species, Cybium interruptum, 56, 3. *Thamvar*, Cybium kuhlii, 56, 2, up to eight feet in length, generally used by the poorer classes. *Sonoula*, Cybium commersonii, 56, 5, up to eight feet in length, generally used by the poorer classes. *Luchak*, Echeneis neucrates, 57, 1, about four feet in length. *Nugli*, Sillago sihama, 57, 3. *Shevta* (Kan.), *Shervi* (Hind.), of four kinds, black, white, *pilas*, and *jáp*; Mugil speiglëri, 74, 1. *Toli*, Fistularia serrata, 76, 3, up to four feet in length. *Sheva kulla*, Cynoglossus elongatus, 90, 5, within a foot in length. *Sheva jámp*, Cynoglossus sindensis, 90, 6, within a foot in length. *Champti Lep*, Callyodon viridescens, 90, 3. *Bakas*, Psettodes erumei, 91, 4, within a foot in length. *Jámp Lep*, Pseudo rhombus, 91, 5. Ditto *Solda*, Bregmaceros atripinnis, 91, 1,

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within a foot in length. *Shingala,* with the species (1) *Povra,* (2) *Chuthva,* (3) *Kharpi,* and (4) *Mavas,* Macrones vittatus, 98, 3. *Gongava,* Chaca lophioides, 112, 2, within two feet in length. *Whál shingla,* Plotosus canius, 112, 3, within three feet in length, found both in rivers and in the sea. *Bendki shingala,* Glyptosternum telchitta, 116, 3. *Bombeel* (Bombay Ducks), Harpodon nehereus, 118, 1, within a foot in length, excellent when dried. *Bokara* (Hind.), *Dindas* (Kan.), Scopelus indicus, 118, 2, within three inches in length. *Katal* (Hind.), *Toli* (native), Belone choram, 118, 4, within three feet in length. *Sumba* (Hind.), *Toli* (native), Hemiramphus cantori, 119, 1; both a fresh and salt water fish, within a foot in length. *Kátál,* Belone annulata, 120, 1, a salt water fish, grows about three feet long. *Bhárvi,* Hemiramphus georgii, 120, 2, a salt water fish. *Papur* (Hind.), *Paka* (native), Exocœtus pœcilopterus, 120, 4, up to four feet in length, found along the coast. *Jirai* (Hind.), *Karai* (Kan.), Exocœtus evolans, 120, 5; a salt water fish, grows about four feet long. *Heráka* (Hind.), Homaloptera brucei, 122, 1, a salt water fish, grows about four feet long. *Gubri,* Clupea chapra, 161, 1, both a salt and fresh water fish, grows to about four inches. *Hyedh* (Hind.), *Thárli* (Kan.), Clupea longiceps, 161, 2, within four inches in length, found in great abundance and sometimes sold as cheap as 100 for a pie. *Vánsi* (Hind.), *Pedi* (Kan.), Clupea fimbriata, 161, 3, grows up to six inches long, both in rivers and in the sea. *Kosir* (Hind.), *Pálpedi* (Kan.), Clupea variegata, 161, 4, grows up to four feet long, is both a salt water and a fresh water fish. Birza, Clupea lile, 162, 1, grows to three inches long, is a salt water fish. *Pala* (Hind.), *Pálpedi* (Kan.), Clupea toli, 162, 2, a salt water fish. *Bhig,* Clupea kanagurta, 162, 4, grows to about four feet long, a salt water fish. *Dodla* (Hind.), *Jirai* (native), Clupea sindensis, 163, 2, grows to two feet long, a salt water fish. *Patulda* (Hind.), *Bádsha* (Kan.), Raconda russelliana, 163, 4, grows to a foot in length; it is generally dried. *Gira* (Hind.), *Pedi* (Kan.), Clupea brachysoma, 163, 3, a salt water fish, grows to six inches in length. *Bodai* (Hind.), Opisthopterus tartoor, 163, 5, a salt water fish, grows up to two feet long. *Karli* (Hind.), *Dathuri* (native), Chirocentrus dorab, 166, 3, grows to about five feet long. *Ghoda,* Hippocampus guttulatus, 174, 6. *Bile,* Triacanthus brevirostris, 175, 1, a salt water fish, about a foot long. *Khend* (Hind.), *Kachka* (Kan.), Tetrodon inermis, 180, 1, both a salt and a fresh water fish, not used for food. *Dharvát* (Hind.), a species of *Mori,* Carcharias menisorrah, 184, 3, a salt water fish, grows to ten feet in length. *Kaksi* (Hind.), a species of *mori,* Carcharias limbatus, 184, 2; Ditto *Zouri* (Hind.), *Khanmusi* (Kan.), Zygœna blochii, 184, 4. *Shirát,* a species of *mori,* Carcharias sorrah, 185, 1, a salt water fish, grows up to four feet long. *Pounar,* a species of *mori,* a salt water fish, grows up to five feet long. Khondecha, a species of *mori,* Carcharias tricuspidatus, 186, 1, a salt water fish, grows up to twenty feet in length. *Shivra,* a species of *mori,* Mustelus manazo, 186, 3; Ditto *Varaicha,* a species of *mori,* Zygœna mallens, 186, 4; Ditto *Thamási,* a species of *mori,* Carcharias gangeticus, 187, 1; Ditto *Shivra,* a species of *mori,* Carcharias dussumieri, 187, 2; Ditto *Vagál,* Trygon zugei, 190, 3,

a salt water fish. *Láng*, Rhinobatus thouini, 190, 4, grows to six feet in length. *Náli* (Hind.), *Genaja* (native), Pristis perotteti, 191, 1. *Morcha* (Hind.), *Vagala* (Kan.), Dicerobatis eregoodod 193, 1. *Pálva*, Trygon kuklii, 193, 2, a salt water fish. *Bátya*, Trygon narnah, 194, 1. *Shenvtha*, Pteroplatea nicrura, 194, 2. *Bolát*, Ætobatis narinari, 194, 4. *Ambla*, (Hind.), Trygon sephen 195, 2. *Mingla*, Urogymnus asperrimus, 195, 1.

The chief fresh water fishes are, *Kures* which grows up to three feet in length, *Shivra* up to eight feet, *Thigur* within a foot, *Kharchi Pithli* within a foot, *Mulia* up to four inches. *Vambu* (I) *Butli* within three feet, and (II) *Lambi* up to ten feet, *Khoulá* within a foot, *Thambansa* within three feet, *Kána* up to three feet, *Indh* up to eighteen feet, *Sindala* (I) with broad head, up to three feet, (II) *Benduk* up to two feet, (III) *Gudmuga* up to three feet, *Shetuk* within six inches, *Karai* within six inches, *Kanga* within ten inches, *Dondga* within two inches, *Maral* up to three feet, *Keri* within two feet, and *Jithkosi* up to three feet.

Fishing.

The fishermen of Kánara do not, as a rule, venture into the deep seas but keep within two or three miles of the coast. Hence they do not make very large hauls and do not catch fish of any large size. During the fair season large shoals of sardines frequent the bay of Kárwár and are caught in large numbers. The best months for fishing are November, December, January and February. During June, July, August and September boats cease altogether from going out to fish with nets but many persons fish with hand lines in the bays creeks and estuaries and have fair sport.

Angling with the rod and fly or spinning with the phantom winnow and natural bait are not impossible in the Kánara rivers. At the same time it is not the contemplative peaceful sport which the soul of Isaac Walton loved, for great labour and heat must be endured and much patience expended before any success can be expected. The most highly prized of Kánara river fish is the *mahsir* or as it is called in Kánarese *karras* or *herabe minu*. The best season for fishing is immediately after the rains when though the water has cleared the rocks are still well covered and the rapids running strong. The fish are then numerous and take well. Full information regarding the best way of fishing for *mahsir* is to be found in The Rod in India by E. C. Thomas, Madras C.S. All his remarks apply to north Kánara.

The present object is to inform the angler where to go. Embarking at Kodibág pier on a warm October afternoon in a boat with a grass roof to shelter him he will run up with the sea breeze and tide to Kadibág a small village on the Kálánadi eighteen miles from Kárwár. There a comfortable forest bungalow affords shelter. Rising about five in the morning a walk of two miles along the river bank, past the teak plantations brings him to the rapids whose roar directs his footsteps to the spot. Here keeping to the bank or wading carefully he may have over half a mile of good fishing. The fly is not recommended but a small fish on a treble hook should be used on a spinning trace. From Kadara the angler should cross the river and ascend the hills to Barbali. Thence to

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Ganeshjudi above the Sahyádris and so on to Yellápur. From Yellápur he should go ten miles to Lalguli where he will find two or three miles of very good river, alternate rapids, pools, and waterfalls. Great care must be taken not to get a fall on the rocks. It is also necessary to have a man at hand who can swim and dive as the hook constantly catches in hidden rocks. A net and a gaft should also be kept in readiness as there are often no sandy shelving banks where a fish can be landed but only shallow pools with high rocks all round. From Lalguli the angler may go to the junction of the Tattihal and thence to Vincholi where again there are beautiful falls and plenty of fish. The next place is Bamanhalli where is a small hut constructed by General Anderson, late Survey Commissioner. From Bamanhalli a walk through magnificent forest leads to Dandilli where is a good rapid and a mile lower down at Kervad is fine fishing ground in the right season. From Dandilli the angler should make for Supa where the white and black rivers join. A neat little bungalow stands on the bank and commands a lovely view. In the lake which the rivers make at this point the water is immensely deep and large fish may be caught by trolling from a boat. For two miles below the junction there are good rapids and pools. Very little can be done after Christmas, until the mangoe showers come about mid-January. If at that time the river is in flood and again clears great sport may be had. Another river which is favorable to the angler is the Shirávati which leaps over the Sahyádris at the famous Gairsappa falls. The way to the best fishing ground is to walk about two miles from the bungalow along the Talgupa road and then strike into the forest on the right when the river side is reached. The angler may walk several miles into the Maisur territory fishing carefully. He is liable to be disappointed, for although the water looks perfect fish are scarce owing to the slaughter which goes on among the young fish in the rains and to the poisoning of the pools in the hot weather. A few years ago during the Christmas holidays a young Madras Civilian caught a very fine *mahsir* in this part of the river. It is useless attempting to fish in the magnificent pools below the falls during the cold weather. The rocks are so slippery no one can stand, much less climb with safety; the wind blows with such violence that a rod cannot be held up against it and the spray beats like the monsoon rain so that the too venturesome angler is not likely to catch anything except a fever or a cold, or perhaps a sprained ankle. But in April and May when the river has run low the pools below the falls may be fished with comfort. It is advisable to have a coracle or a collapsible boat which can be carried and launched on the pool.

Shoals of fish may be seen feeding on the bird lime which falls from the rocks above where myriads of swallows and pigeons make their home. A long line is necessary as the fish run large and the pools are immensely deep. A bait which will tempt the largest fish is a young swallow; they sometimes fall into the water and are taken down at a single gulp: only a swirl in the pool shows where the monster silently rose. The fly may be used with success when the wind is favourable.

Another river which affords sport is the Agnáshani or Taddri. Starting from Kumta the angler must make his way about twenty miles to Mankibail at the foot of the Nilkund pass. Then turning to the right he should follow the river till the foot of the Doddamani pass is reached and a camp should be made at a small village called Shamamani. The river comes down the valley between the two passes after dashing over the cliff at the villages of Unchalli and Hosatota in the Lushington Falls. Excellent pools and rapids stretch for several miles, but it is little use trying when the river runs low, for the fish are all crowded in the long reaches of deep still water.

Fish.

Most of the birds given by Captain E. A. Butler in his Catalogue of the birds of the Deccan and Southern Marátha Country are found in Kánara. The principal game birds are noticed in the Appendix.

Birds.